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REMARKS

The Examiner has rejected Claims 6, 9, 11, and 13 under 35 USC 103 as being unpatentable over Kubin *et al* in view of Laroche.

Before discussing the prior art references in detail, Applicant will summarize the main features of the claimed invention. In this regard, it is necessary to distinguish between the "portion of the first signal, in which a transient detection is performed" and the codebook, which is used, as defined in the penultimate paragraph of Claim 1, for searching a synchronization point. Thus, Claim 1 does not teach that the synchronization point is searched in the portion of the first signal. Instead, Claim 1 clearly teaches that the synchronization point is searched in a codebook, as determined in the step of determining.

Importantly, the relevance of the synchronization point is that samples from the codebook are used for generating a current output segment starting from the synchronization point obtained in the step of searching.

The Examiner has stated that Kubin discloses that a search for a synchronization point in a codebook, as determined in the step of determining, is performed. However, because the step of determining as defined in Claim 6 is different from any "stage transition codebook" on page 455 of Kubin, Kubin cannot disclose the step of searching for a synchronization point in a codebook, "as determined in the step of determining."

Furthermore, Kubin only discloses a "jump to a new time location." However, Kubin is silent on correlating a comparation segment of a previous output segment with the codebook, as determined in the step of determining. Importantly, the step of searching clearly takes place in a "previous output segment," rather than in a portion of the first signal, as defined in the second paragraph of Claim 6, or the codebook as discussed in the third paragraph of Claim 6. Thus, Kubin does not disclose the limitation of "correlating a comparation segment of a previous output segment with the codebook as determined in the step of determining."

Regarding the step of generating a current output segment, the Examiner refers to the term "the oscillator is run with the sequence of codebooks." However, the step of generating uses samples from the codebook "for the current input segment starting from the synchronization point obtained in the step of searching". For this limitation, Kubin does not include any counterpart.

In view of that, Kubin does not disclose the step of determining, the step of searching and the step of generating as defined in Claim 6.

Regarding Laroche, U.S. patent 6,049,766, the teaching of this reference is to find a portion in a signal which can be advantageously skipped to reduce the length of a time signal or which can be repeated to increase the length of a time signal. As stated in the second and third paragraphs of column 2 of Laroche, the passage of the input signal which is best suited for being skipped or repeated is a passage which has a high periodicity. This is understandable because repeating a periodic portion or skipping a periodic portion is not perceivable, *i.e.* does not incur any conspicuous artifacts.

What Laroche does is to provide a buffer, storing about 40 milliseconds of music. As stated in column 4, lines 60-61, these 40 milliseconds of music are analyzed to determine whether this passage is periodic and whether this passage includes transients. When the passage is very periodic and free of transients, then a cross-fade operation with a signal pointed to by the cross-correlation is performed, as stated in box 506 of Fig. 5. Particularly, the beginning of this periodic portion is positioned at a certain point in the highly periodic portion of the audio signal, which is in the current buffer, because the current buffer is what has been analyzed. When, however, it has been found that the current buffer content includes a transient then, as stated in box 510 of Fig. 6, one advances to a new input buffer, again including 40 milliseconds of music, but an advance of 5 milliseconds has been done as stated in column 4, line 62. When a transient is detected in this buffer, it is again advanced to the new input buffer. When, however, no transient is detected in this buffer content, then a position in the buffer is determined, *i.e.* a "position of a segment of the audio signal to be skipped" as, for example, stated in column 11, line 43.

In contrast to Claim 6, Kubin does not disclose the step of determining the code book such that an end of the codebook is "with respect to time" to the left of the current input segment of the first signal. Again, the "current input segment of the first signal" is the signal in which a transient detection has been performed.

Furthermore, Laroche is completely silent on "determining the codebook such that the codebook with respect to time extends to the right of a current input segment of the first signal so that a search for a synchronization point in the determined codebook prior to the transient is not allowed."

The relevance of the "codebook" in Claim 6 is that the search for a synchronization point is performed in the codebook, and by placing the codebook before the current input segment in case of no transient and subsequent to the current input segment in case of a detected transient, one makes sure that the current output segment as generated by the step of generating can not include the transient. This, however, does not come by fortune but is due to the fact that, in the step of generating, the generation of the current output segment is started from the synchronization point, which is in the codebook positioned to the left of the current segment in case of no transient, or to the right of the current segment in case of a transient.

Because Laroche only works on a buffer without having any regard to a codebook, and without having regard to the position of a codebook with respect to the current input segment depending on the transient detection, Laroche can not render obvious the subject matter of the invention as defined by Claim 6.

With regards to the Examiner's interpretation of Laroche, the Examiner compares the "current buffer" to the "current portion of the input signal". Regarding the "determining the codebook" limitation of the fifth paragraph of Claim 6, the Examiner asserts that anything is placed "to the left of the current input of the first signal". However, this is not true, because this would mean that one would step back to the previous input buffer in any way. However, Laroche only discloses to "advance" to the new input buffer, *i.e.* to the portion of the time signal being 5 milliseconds later in time, as clearly disclosed in column 4, lines 62-63.

It is not true that in Laroche anything is begun "before the beginning of the current buffer".

The Examiner states that the segment is used for repeating that which begins before the end of the current buffer. However, this definition does not fulfill the limitation in the fifth paragraph of Claim 6, because this passage clearly states that the end of the codebook is to the left of a current input segment of the first signal.

Thus, "beginning before the end of the current buffer" is different from placing a codebook so that the end of the codebook is to the left of a current input segment of the first signal. Again, it is the current input segment of the first signal, which is subjected to the transient detection.

Thus, even when one would interpret Laroche as is asserted by the Examiner, Laroche would not read on the claim language in the fifth paragraph of claim 6.

Regarding the other case, *i.e.* when a transient is detected, Laroche also does not disclose the term "codebook" or that a "codebook" is placed to the right of the current input buffer. Because the buffers in Laroche overlap, the new input buffer mentioned in step 510 does not correspond to the codebook extending to the right of a previous input buffer, because the new input buffer has at least 35 milliseconds of the same information as the previous input buffer and can, therefore, not be regarded as an input buffer placed to the right of the current input segment of the first signal.

Furthermore, assuming that a transient is, for example, at the position of 20 milliseconds in a 40 milliseconds portion, then due to the transient detection it is advanced to a new input buffer 510. In the new input buffer, the transient is at 15 milliseconds of the new input buffer extending from 5 milliseconds to 45 milliseconds with respect to the previous input buffer. This, however, means that a search for a synchronization point "prior to the transient" is allowed in Laroche, when one would compare a new input buffer to the "codebook" as the Examiner obviously does in saying that a "next buffer" is positioned to the right of the current input segment or current buffer, as stated in the first paragraph of page 5 of the Office Action.

Therefore, even when one would interpret Laroche as done by the Examiner this interpretation does not fulfill the limitation that a search for a synchronization point in the determined codebook prior to the transient is not allowed.

In view of the above, neither Kubin alone nor Laroche in combination with Kubin renders obvious the subject matter of the claimed invention.

Should the Examiner find it helpful, he is encouraged to contact the Applicant's attorney, Michael A. Glenn at (650) 474-8400.

Respectfully submitted,

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